



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

NOV 16 2000

400 Seventh St., S.W.
Washington, D.C. 20590

DOT-E 8650
(NINTH REVISION)

EXPIRATION DATE: October 31, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Ethyl Corporation
Richmond, VA
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of certain materials listed in paragraph 6 below in non-DOT specification steel portable tanks. This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.242(c), 173.243(c), 173.244(c) and 174.63(c)(1) in that non-DOT specification portable tanks specified in this exemption are authorized.
5. BASIS: This exemption is based on the application of Ethyl Corporation dated October 19, 2000, and supplemental information dated November 7, 2000, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Flammable liquids, n.o.s. (contains petroleum distillates)	3	UN1993	III
Flammable liquids, toxic, n.o.s. (xylene; methylcyclopentadienyl manganese tricarbonyl)	3	UN1992	III
Metal carbonyls, n.o.s. (Methylcyclopentadienyl manganese tricarbonyl)	6.1	UN3281	II
Motor fuel anti-knock mixtures	6.1	UN1649	I

7. SAFETY CONTROL MEASURES: Prescribed packaging is a non-DOT specification portable tank, mounted in ISO frame, designed and constructed in accordance with Westerwalder Eisenwerk drawings CS-529/0 Rev. A dated June 23, 1980, CS-529/3 Rev. A, other drawings, calculations and technical specifications on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) dated after June 26, 1980.

a. Code - Designed to ASME but not marked and otherwise conforms with DOT specification 51 but not so marked.

b. Insulation - none

c. Water Capacity (U.S. Gallons) - 2,890

d. Material - West German fine grain carbon steel St E 36 equivalent to ASTM A516 grade 70

(outside dia) x (length) x (thickness)
e. Tank Size
(inches) - 62.99 232.28 0.3937

Head Thickness - 0.3937

Weld Joint Efficiency - 1.0

f. Design Pressure (PSIG) - 100

Note: Design pressure means "maximum allowable working pressure (MAWP)" as used in the ASME Code.

- g. Test Pressure, Minimum (PSIG) - 150
 - h. Openings - One (1) 20-inch diameter manhole containing filling and discharge connection, vent connection, safety valve connection, fusible element connection and a blank flange on top; no bottom outlets.
 - i. Tank surface area (square feet) - 334
 - j. Safety relief devices:
 - (1) One (1) 1.0-inch diameter spring loaded safety relief valve in series with and outboard of a rupture disc both set at 100 psig with a relief capacity of 92,760 SCFH and one (1) 2.0-inch diameter fusible element with a fusing temperature of 250°F and a relief capacity of 235,638 SCFH. Total relief capacity is 328,938 SCFH; or
 - (2) One (1) 1.5-inch diameter spring loaded safety relief valve in series with and outboard of a rupture disc both set at 100 psig with a relief capacity of 144,240 SCFH.
 - k. G-Loadings Vertical down 2; Vertical up 2; Longitudinal 3.5; and Transverse 1.5.
 - l. Maximum Gross Weight (pounds) - 55,000
 - m. Maximum Commodity Weight (pounds) - 43,540
 - n. Tare Weight, nominal (pounds) - 11,460
 - o. Design Specific Gravity - 1.58
8. SPECIAL PROVISIONS:
- a. Each portable tank must be plainly marked on both sides near the middle, in letters at least two inches high on a contrasting background, "DOT-E 8650".
 - b. Hydrostatic test certificates for each tank must be kept on file by the manufacturer or owner at its principal business office and be made available to a DOT representative upon request.
 - c. No product may be shipped that has venting requirements exceeding the capacity of the installed safety relief devices, or has a specific gravity greater than 1.97. The

venting capacity required for each product must be determined by the flow formulas contained in Compressed Gas Association (CGA) pamphlet S-1.2.

d. Each portable tank must be marked with the appropriate proper shipping name listed in paragraph 6 of this exemption.

e. The tank must be filled so as not to be liquid full at less than or equal to 130°F.

f. Each tank must be (i) visually inspected prior to each trip to ensure that it has not been damaged on the previous trip; (ii) visually inspected at least once every 2-1/2 years in accordance with the provisions of § 173.32b; and (iii) pressure tested at least once every 5 years, at one and one-half times the design pressure.

g. Portable tanks may not be transported in trailer on flatcar (TOFC) service except under conditions approved by the Associate Administrator for Safety, Federal Railroad Administration (FRA). Portable tanks may be transported in container-on-flatcar (COFC) service only under the following conditions:

(1) Portable tanks must be equipped to be securely attached to a railcar equipped with an ISO standard COFC basic pedestal system designed for container support and securement;

(2) Each railcar used to transport portable tanks must be equipped with a cushioning system that meets the requirements of the Association of American Railroads Specification M-952-82; and

(3) Shipments made under this exemption must be in accordance with § 174.84.

h. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

i. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.


9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7th Street, S.W., Washington, DC 20590-0001, Attention: Records Center, 202-366-5046.

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